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EDITORIALLY SPEAKING

SHORTER OR RICHER?

Columbia University, it is reported, has a law student who is only fifteen years old and small for his age. Naturally his mates think and speak of him as "the little boy" and quite as naturally he resents it. There appears to be a social side to the rapid advancement policy that will have to be reckoned with, whether the measuring men recognize it or not. Some parents are taking their children out of school for a semester at a time when the school authorities push them ahead too fast, and they are undoubtedly within their rights in doing so, whatever the compulsory attendance law may be.

For it is no kindness to either boy or girl to shorten by two or three years the period of his or her schooling and thrust him into college socially and physically less mature than others. Doing lessons is not all of education by a good deal.

To the recent sudden discovery that many bright children are "retarded" should be added another quite as significant, namely, that the bright child is entitled to the full period of schooling. So far from being the gainer, the able pupil is actually the loser by extra promotion, assuming that the school could if it would give him a plenty with which to occupy himself. Civilization has accumulated an abundant store of experience. According to our present laws children in most states are privileged to enjoy twelve years of elementary and high school in assimilating this. It costs no more, usually less. to offer the gifted pupil his full opportunity than in the cases of others. Parents are beginning, and very properly, to demand that children who can do more than the average be provided not with a shorter but with a richer course. To do this less administration and more educational method will have to be employed. Just when the push buttons are all in place it turns out that there may not be much occasion to use them.

JOHN ADAMS IN AMERICA

After many years of distinguished service in England, Dr. John Adams of the University of London is enjoying a well-earned vacation in this country. With his accustomed energy he mingles work with play by lecturing and writing,

being a special lecturer for the winter at the University of California in Berkeley. While himself not noted as an investigator, he keeps an eye on all new movements in education and shrewdly appraises each at somewhere near to its true value. Those who either hear him or read what he has written have the pleasure and stimulation of that all too rare an accomplishment among educators, a distinctive style. Because of this he will be a welcome contributor to American educational journals, for however valuable their substance, certainly they can lay little just claim to suggestiveness of style.

METHOD AND THE EDUCATIVE PROCESS[1]

ALFRED L. HALL-QUEST
Professor of Education, University of Cincinnati

Method and the educative process are so intimately related that it is impossible to define and to discuss the latter without at least implying the former. This is true even of that less formal process of education called experience. Hit or miss, uneconomical of time and strength, all too frequently ineffective, financially expensive, the method of experience must be regarded also as wasteful and uncertain. It is no less true, however, that these attributes can be applied to the ways and means that have characterized, and still do characterize, many of the more formal types of education. If one adds traditional and unscientific to the list of attributes, the criticism of the prevailing practices in many quarters of public education seems well-nigh complete. Method, however unpopular the term may be, still remains the unrevealed secret in the educative process.

A mere glance through the pages of the history of education is sufficient to call to mind that leading educational theorists of the past were preëminently advocates of this or that method. Quintilian's *Institutes* is replete with discussions and minute descriptions of methods in various subjects. The school men of the fifteenth and sixteenth centuries revived Aristotle's plan of learning. With the dawn of the Renaissance came also a mad revival of classical educational standards, one result being the mechanical and deadening method known as Ciceronianism. One needs only mention the names of Rousseau, Locke, Froebel, Pestalozzi, and Herbart to see the procession of methods passing in review, with waving banners, bearing such well-known terms as interest, instinct, discipline, elements, formal steps, and so on. Each of these points of view has dominated education, several of them engaging in vigorous warfare, to the confusion of pupils and teachers alike. Dismal examples of how some of these champions of methods influenced classroom activities a generation ago are the old copy-book in handwriting, the formidable word lists in spelling, and the meaningless syllable-

[1] A paper read before the Ohio Society of Educational Method.

method in reading. A generation ago? Would this were true!

Before proceeding further let us seek to understand the terms of our subject —"Method and the Educative Process." What is a method? What is a process? The Standard Dictionary defines process as "a course or method of operations, natural or artificial, incident to the accomplishment of a result." It is a "systematic series of actions in the production of something; a forward movement, especially when steady and long-continued and resulting in growth or decay." It is a "progressive proceeding." In the same source method is defined as "a general or established way or order of doing or proceeding in anything, or the means or manner by which such way is presented or inculcated." It is "a system of instruction; a mode of applying logical principles to the discovery, confirmation, or elucidation of truth."

These definitions are suggestive. The educative process, we may say, refers more closely to the steady, long-continuing series of actions inherent in the nervous system of an individual by means of which the individual maintains himself either in conformity to innate modes of behavior or in readjustments stimulated by a changing internal or external environment. It is the course followed by an organism in its efforts to express its various functions, physical or mental, as needs arise. It is the closely related series of actions, each dependent on the other, employed by an organism to express itself, first as it is, and secondly as it must become in order to achieve adequate or more satisfying self-expression. The first task of each individual is to express himself with what he has. This applies to plants and animals as well as to man. In so doing, however, the individual usually is hampered by conditions, both internal and external, that require various modifications of behavior natural to him. The effort put forth to overcome such conditions, or to conform to conditions that agree with what he is, but also favorable to a fuller expression of what he is, we may term an educative series of efforts. The educative process tends not only toward fuller self-expression, but toward skill in such expression as may be required by an environment quite different from that which is sufficient for the expression of what the individual is at a certain moment.

Method, on the other hand, includes the various means by which the individual makes such activities as described adequate and more fully satisfying. For example: Perception is a process; ways and means of enabling it to function properly is method. Memory, thinking, judging, and reasoning are processes; modes of surrounding them with stimuli and favorable conditions belong to method. Muscular movement is a process; training it to perform handwriting, drawing, sewing, carving is method.

If these distinctions are correct the first requirement of method, in order to establish it as sound, is that its procedure shall closely harmonize with the series of actions belonging to process. Method must not violate process; process must find a skillful and loyal handmaiden in method. Consciously or unconsciously the large number of ad-

vocates of methods in education probably sought to bring about such agreement. They were hindered, however, by the same inadequacy that blocks the way to fuller agreement today, namely, full knowledge of the nature of the series of actions belonging to process. Unlike the modern student of education, theorists and investigators in the past did not possess the means of observation and investigation that have revolutionized method in such a subject as reading, for example. Educational psychology and experimental education more vigorously than ever are attacking the secret chambers of the learning process in general and more particularly its modifications as determined by the respective school subjects. It is obvious that any other approach to an understanding of method will continue to lead to a multiplication of the evils attending many of the so-called special methods courses, which all too frequently are devoted to little more than shallow devices.

In the effort to arrive at a scientifically supported concept of method it is helpful to consider the learning process from several points of view and by way of at least tentative classifications. Through experimentation such points of view and classifications no doubt will need considerable revision.

First. The objectives and content of education may be grouped under three large mental and emotional performances, namely, *understanding*, *thinking*, and *appreciating*. Do we sufficiently grasp the differences among these three types of behavior? Wherein do understanding and thinking differ from each other? Is it necessary to think in order to understand? What may be the relationships between understanding and appreciating? There are valuable contributions in educational literature on thinking, but no one has yet attempted a book on "Teaching Children to Understand and Teaching Children to Appreciate." The helpful book by Adams on *Exposition and Illustration in Teaching* and by Hayward on *The Lesson in Appreciation* indicate the considerable number of unsolved problems in these fields. Minor discussions are available, but no outstanding authoritative, because scientific, volume can be referred to. Here is a challenge to students of educational method. How do children understand? To what extent is the process of understanding in geography and in arithmetic evolved according to the same laws? Wherein should method in teaching toward appreciation in poetry differ from the method of problem-solving in poetry? Need understanding lead to appreciation? Can there be appreciation without understanding? The questions are well-nigh legion and none of them can be answered to the teacher's satisfaction until painstaking analyses of these performances — understanding, thinking, and appreciating — have been made and principles and laws determined.

Second. There are the analysis and classification based on the *symbols of learning*. Here we find interesting material. In mathematics we employ symbols of calculation, such as numerals, letters, signs, figures. Reading, however (using the term chiefly as a subject and not as a process), is made up of words in a variety of groupings, and also of other symbols called punc-

tuation marks. These words and marks are used for communication. The formulæ, charts, maps, graphs, and signs employed in science are a third group of symbols engaged by the learning process. Art, likewise has its own language, whether graphic, plastic, or tonal. A considerable amount of abstraction is required in the efficient handling of the many kinds of symbols required in education. The process of abstraction must have a corresponding method by means of which the learner can be trained to handle symbols as readily as he does concrete objects; nay more readily, for the bulk of educational content necessarily makes use of a considerable number of symbols.

Third. Equally vital to the efficiency of learning and teaching is knowledge of and skill in the use of various manipulative agencies of education. The physical adjustments required in manual activities, and in larger bodily movements as in play and dancing, must be as clearly understood as those referred to above. Sound educational method in handwriting, art crafts, graphic art, laboratory experimentation, workshop activities (as in home economics and industrial arts) is of paramount importance, not to a select few, but to everybody. Again, a knowledge of the laws and principles of physical coördination is imperative before educational method can be safely determined.

The foregoing classifications are only a few with possibly many others. Training in observation, in both formal and informal speech, in group coöperation, in the planning and execution of reproductive tasks and of creative undertakings, all admit of subdivisions and require educational methods that must conform to the nature of the process and processes belonging to these types of learning. At least five large groups of processes with corresponding methods can therefore be considered:

1. The arts and skills of *calculation*, with the symbols referred to above.

2. The arts and skills of *communication* as briefly surveyed.

3. The arts and skills of *manipulation* already briefly described.

4. The arts and skills of *idealization*, *i.e.*, training the learner to recognize and properly react to selected ideals of individual and social conduct.

5. The arts and skills of *socialization*, by which is meant the development of efficiency in leadership and coöperation in groups, large and small.

The student of education is aware that several types of methods have been evolved to meet the ends and processes outlined. It is necessary to mention only the *textbook method* with its close dependence on the arrangement of an adopted book and on the daily assignment — recitation — memory and drill types of learning and instruction; the *problem-solving* type, which seeks to reduce all educational material to the terms of problems, in the solving of which the learner supposedly acquires not only skill as a thinker, but also a hunger and thirst for riddles, puzzles, mysteries, complexities — in a word, for educational "sleuthing" in all departments of learning; *the socialized recitation and class-period* in which every activity is translated into democratic pupil participation, with the teacher little more than a member of the pupil

group itself; *supervised or directed study*, whose purpose emphasizes the need of teaching and training children in the effective use of a large variety of study tools under conditions most favorable for the performance of the study activity; and the *project-method*, through which the pupils grapple with purposeful activities, vital situations, and thereby gain a complete experience, one that is a dynamic, synthetic, and satisfying enterprise.

None of these methods needs to exclude any or all of the others. The advocates of the project-method regard it as all-inclusive. The satisfactory use of the textbook; the skillful solving of problems; training children to form effective habits of study and supervising them while these habits are in the making — all of these may appear in the socialized project performance.

It goes without saying that no method is permanent. Perhaps it cannot be universally applicable. Social conditions change and to meet the more fundamental of these changes there must be evolved new educational policies and technic. The signs of the times must be understood. There can be no doubt, however, that by whatever name the favored educational method is known, at the core it must have a large portion of common sense. As one looks over the numerous programs of teacher training, and reads the oracular pronouncements of many current theories of special methods, the conviction grows that the zeal of its friends is in danger of burning up the temple of public education. There is a deep-going need of an academy of educational theory and practice, under whose auspices a sane and sound concept of educational method may gain general recognition and adoption.

If the foregoing all too cursory analysis of the relations that need to be established between the educative process and educational method essentially is correct, the closer association of educational theorists and practical school men is of paramount importance. The writer of this paper hesitates to propose a platform for such an organization. He does venture, however, a few suggestions that may serve to promote the careful and constructive investigation of educational method.

First. The term "method" must be rescued from its general disrepute. When teachers planning to enroll in the summer school of a well-known university arrived at the railroad station they were hailed by the bystanders with, "Here come the methodites!" Not a little of the criticism flung at teacher-training institutions by liberal arts and other departments in colleges and universities has been aroused by the multiplication of special methods courses, taught all too often by persons who have only a very meager knowledge of the subject matter that the method aims to present in a manner supposedly inspired. It is a question whether one can plan a course as long as a semester, devoted exclusively to some method. A notable exception is reading. Special methods in arithmetic and geography — not to mention others — of necessity include a large amount of arithmetic and geography content; and the instructor in charge should be as conversant with the content of the subject as the instructor in charge of

the pure subject-matter course. On the other hand, the common practice of persuading liberal arts instructors to give special method courses in their respective subjects is equally unsatisfactory, for obvious reasons. Such instructors are usually unfamiliar with the literature on method; they are not specifically informed regarding the science of education; they lack the necessary point of view. Exceptions there are, but again they prove the rule. Scholarly training, both in content and the psychology and pedagogy of method, is essential if the instructor of special methods courses is to win respect and be regarded as a thorough educator.

Second. Educational method is more comprehensive and deep-going than are special method courses. It is synthetic and vital. Its tap roots rest in the soil of well-understood laws and principles of learning. Its point of view is not tradition or opinions — it is scientific experimentation and investigation. There are courses in medicine and engineering that might be termed "special," but they grow out of a comprehensive treatment of the matter in hand. A course in brain surgery, for example, is principally a study of technic, but anatomy and neurology are among the allied subjects that must be thoroughly understood before such a special method can be applied. It is not unlikely that a more thoroughgoing study of the foundations of method will result in the abandonment of many loosely and thinly organized special methods in education.

Third. There is a crying need for sympathetic coöperation among all who train, employ, and supervise teachers. As long as a college of education has one point of view, a normal school another, a state department of education a third, local superintendents, principals, and supervisors still others, we are simply chasing squirrels up and around trees. Many young people leave training schools well trained. Let us suppose they have been instructed in the technic of the project method. They are employed in a school system whose older teachers, superintendent, and principal oppose the project method. The newcomer may struggle for a time against a sea of trouble — as Carol did against Gopher Prairie, but the gophers won! The local school authorities and those in charge of the training of teachers must understand one another; and machinery must be constructed to make sympathetic coöperation more easily and more generally possible.

Fourth. The organization of school men and women for the purpose of studying educational method and ways and means of coöperation in experimental applications of such method will gain respect and exert wholesome influence if the attitude of science, and not tradition or opinion, controls its work. Patience and thoroughness and fair-mindedness are elements in this attitude. The goal of such an organization's work should be nothing less than a serious study of what education means, of what the educative process involves, and especially in the light of these meanings how a method may be developed that will be soundly educational through a technic that is stimulating, economical, and in harmony

with the laws of human growth. Such a method will rest, likewise, on a knowledge of the needs of man in the workaday world. It will attempt to teach and train the child to live in his world — a world expanding day by day, with needs recurring and new wants appearing — a world made up of multiple experiences so closely interrelated that cause and effect are constantly shifting rôles. Educational method must deal with natural, not artificial conditions. It must deal with the individual according to his peculiarities — not with the mythical average child. It must include both the mentally poor and the mentally rich, for of such is the kingdom of man.

LABORATORY METHODS IN INTRODUCTORY SCIENCE[1]

PERCY E. ROWELL
Technical High School, Oakland, California

THE PURPOSE OF LABORATORY WORK

The laboratory period should be considered as a study period in which the pupil obtains knowledge from things and not from that which represents things — the textbook. In the laboratory the pupil obtains first-hand education; from the text he may acquire second-hand information. This does not mean that it would be desirable for the pupil to repeat all the discoveries of science in order to have the advantages of a first-hand education, but it does mean that in a simple manner he should learn a few elementary facts and principles from the things themselves, thereby establishing in his mind the ideals and habits of the scientific means of approach. The text is an absolute necessity for the successful study of science, and should be a constant guide and help to the pupil, but in addition he should be so treated in the laboratory that he may obtain through his own efforts a consciousness of the spirit of science.

The purpose of part of the laboratory work should be the verification of the statements contained in the text. The idea of evidence and proof should be firmly established in the pupil's mind, together with a hesitancy in jumping to conclusions. He should be gradually led to realize that the worst possible evidence is contained in the statement, "The book says so!" and that even a laboratory experiment may be wrongly construed unless several trials have indicated the same results.

Another purpose of the laboratory work is to place the pupil in the position of an investigator. To many this may seem rather advanced work for the grades, but a little reminiscence will show that much of our early learning was through results of inquisitive trials. In the laboratory, however, this natural quality of the human mind may be directed toward definite goals.

It is evident that if new work is to be given in the laboratory it should precede the lecture and recitation; while if the

[1] See "Classroom Methods of Introductory Science," by the same author, in the May, 1923, issue of this magazine.

laboratory experiments are to verify the text, or to elaborate some of the experiments which the teacher has performed, the laboratory period should follow the lecture and recitation. These conditions require a skillful management and a thoughtful assignment of the science lessons if the best results are to be obtained from "the most highly recommended and the least successfully practised phase of instruction."[1] The problem, then, seems to be one of practice, of special method, and to be solved only through concrete plans which are rich in details.

KINDS OF EXPERIMENTS

The choice of experiments will determine to a very great extent the success of the laboratory work. If the experiments are beyond the capacity of the pupils, either because they are too difficult or because they require mental and bodily qualities which are not easily developed in young children, or which perhaps are utterly impossible of achievement, the laboratory work will be a failure. Close and sustained observation of small physical quantities have no place in introductory science. The experiments should be qualitative and never quantitative, in the strict sense of the word.

The experiments should be connected with large things, chiefly those with which the pupils are ordinarily familiar. If a sundial is to be used it should be a large one, and the hour divisions should be marked on a large circle. If the experiment is on crystallization, enough material should be used to permit the formation of a large crystal. Should the experiment be on germination tests, a large variety of seeds are desirable. If the growth of a plant is to be measured, the plant selected should be one of very rapid growth. Any tests for food constituents should be very decisive; there should never be any question as to the evidence.

Experiments which involve motion are most attractive to young children, and may often be used to advantage in even the upper grades of the high school. If the experiments also require considerable motion on the part of the pupils they will be more interested and will learn the contained truth more easily. Thus first-aid exercises are valuable not only for the training for quick and effective response, but also because of the actual motions which are involved. Testing the capacity of the lungs, or trying the "sucking" ability of the mouth, are both valuable because of the personal motions and the motions of the apparatus, and also because the competitive spirit may so easily be aroused. A certain amount of gardening is likewise of value for the same reasons, unless the work becomes irksome on account of too much useless repetition in cultivation. If the experiments involve living things the pupils like them, and consequently there should continually be experiments with plants and some of the smaller animals. The observation of the weather and keeping a written record of its various phases is a continuous source of interesting and valuable experimental material. Although the young pupil wants quick results, he has no objection to watching the changes of the altitude

[1] McMurry, *Special Method in Elementary Science*, p. 83.

of the sun from week to week, or even from month to month; the waxing and waning of the moon, together with illustrated records, are a never failing source of pleasure to a young child if ever his attention has been called to the changes in a scientific manner. The child possesses an almost inexhaustible supply of stored-up energy, the release of which, if properly directed and controlled, will carry him far into scientific study.

SIMPLE APPARATUS SHOULD BE USED

The apparatus which is to be used in introductory science should be of the simplest kind. The advantages are many and there are no disadvantages. The chief value of simple apparatus, made from the common things of everyday life, lies in the fact that through it may be taught an appreciation of the commonplace. "A scientific teacher can make a pail of water, a hot-air stove, and a school yard the means of first-rate experiments. Indeed, the instructiveness of an experiment is commonly in a rough proportion to the simplicity of the apparatus used."[1] Another advantage of using simple apparatus is that the experiments may be repeated at home, since the pupils can make their own apparatus, and thus the science work may become real to them.

If combined with the experiments the pupils can be given opportunities of making things, not from the viewpoint of manual training or shop experience, but as a means of expression, they will have gone far on the road toward self-education. The element of play and the consciousness of increasing creative ability will be powerful factors in their scientific advancement. Where possible — and such opportunities must be made — some of the apparatus should be constructed in the laboratory before the experiments are performed. If this is not always feasible, the parts of the apparatus should be supplied, but not assembled. To assemble apparatus is the nearest approach in educative value to making it, for the young pupil often does not realize that he is not making the apparatus. A striking example of this is the huge number of boys who have assembled radio outfits from parts already made, and who really believe that they "made" the whole plant!

The possibilities which lie in the ordinary chalk box is an excellent example of the use of common things. If a piece of window glass is substituted for the cover, the box will become a small "hot-house" in which plants may be started. If a piece of wire netting is used instead of the glass, the box may be used as a temporary, or carrying, cage for small animals. Placing a partition in the box, made from the wooden cover, it becomes a piece of apparatus for the illustrating of convective air currents, if suitable holes are cut and the glass cover is used. If a protractor and a nail are used on the edge of the box, a device will be formed by which the altitude of the sun may be measured. Two boxes used together, at varying angles, will indicate the surface over which a given amount of sunshine is spread at different seasons. By means of two pieces of mirror the box may become a periscope; with one mirror and a piece of ground

[1] Thorndike, *Education*, p. 178.

glass it may be turned into a sketching camera; with the ground glass alone the box will make a fair pin-hole camera. If a simple and cheap lens is used the box may be arranged to take pictures, which, although far from being perfect, will illustrate the usual camera. If the direction of the light is reversed, this camera will become a projection lantern, at least as a piece of apparatus. Many other ideas will be suggested to a fertile mind — and it must be remembered that fertility is often a matter of cultivation.

Tin cans are another valuable source of simple apparatus. With them, or from them, may be evolved many a piece of educative scientific apparatus. Flowerpots find their use as porous cups, illustrating diffusion, while bottles, lamp chimneys, drinking glasses, saucers, and other ordinary articles will nearly complete the list of needed apparatus. For materials use may be made of sticks, stones, nails, pins, sand, loam, pieces of window glass, cloth, paper, cardboard, pieces of brick, lamp wicks, and such other things as have their place in our environment.

Finally, there is an administrative viewpoint which must be considered until the people realize that nothing is too expensive in education if the desired results are to be produced — the cost of a science course is much less with simple apparatus, and by its use one of the chief objections to the introduction of science in the grades is removed. Although this advantage is mentioned last it must be understood that, even with plenty of money to spend on expensive apparatus, the most effective and lasting instruction in introductory science will always be given through the use of ordinary articles as apparatus and illustrative material. It is the education which becomes a part of the daily life of the pupil that grows and persists.

EACH PUPIL SHOULD PERFORM ALL THE EXPERIMENTS

If the laboratory work is to produce the most favorable results, each pupil must perform all the experiments. Too much emphasis can not be laid upon this statement. Laboratory work is valuable only on account of the *doing;* otherwise it is not laboratory work. In real laboratory work the whole of the pupil's attention is directed toward a definite object — to learn from his own experience. "The physical training . . . , the mental training . . . , and the moral training in engaging the attention of the whole child . . . , speak so loudly for the laboratory method. . . . "[1]

The fact that each pupil should perform all the experiments does not prevent two pupils from working together as partners, and the plan has the added advantage of arousing a feeling of cooperation. The amount of apparatus which is needed for the course is halved by this method, not alone lessening the expense, but also causing a reduction in the work of handling the material. Care must be taken, if the partnership method is used, that it is a true partnership and not a case where one pupil does the work while the other one watches. Continuous partnerships between the same two pupils may not be desirable,

[1] Bailey, *Inductive Elementary Physical Science,* Introduction.

and several changes should be made, not only to obtain the best combinations but also that a general democratic spirit may be established in the laboratory. Partnerships should be between two boys or between two girls; rarely between a boy and a girl. In the latter case the boy usually becomes the servant of the girl, which may be good for the boy, but which deprives the girl of her much needed opportunities for self-activity. In fact, the only disadvantage of any partnership is that one member may do most of the work, and learn the most, while the other only watches and learns little.

It is not necessary that all the pupils perform the same experiments at the same time. Several different experiments, preferably of the same general group, may well go on together, each pupil, or partnership, performing in turn all of them. This plan requires a little more work on the part of the teacher, but it will save a large amount of apparatus, since only a set or two for each experiment will suffice.

QUALITIES TO BE DEVELOPED IN THE LABORATORY

Each subject of the curriculum has its own methods, but science has the educative advantage of developing some of the general admirable habits of life. These are neatness, order, completeness, general observation, scientific attitude and style, and the habit of tackling problems and overcoming difficulties. It may be said that these qualities will not function in other studies, or in life; that the claim that they will do so is based upon the discredited doctrine of formal discipline. This is true, — "unless the ideal has been developed consciously, there can be no certainty that the power will be increased, no matter how intrinsically well the subject may have been mastered."[1] But the teacher of science, in the ordinary routine of teaching the subject matter, *has* the opportunity of establishing these conscious ideals. If neatness is demanded, and the pupil is taught to realize that it is the proper thing to be neat, always being urged to strive for neatness, there will be established the ideal which will be valuable to him in his other work, and also in life. Similarly, the ideal of order and completeness, proper procedure and finish, may be developed consciously; the power of observation, the scientific attitude of mind, may both be held as goals to be consciously sought and consciously attained. A fine example of a conscious ideal is the "New England conscience," an attitude of mind which has done so much in maintaining high standards in *all* lines of work and endeavor.

Since the power to observe in science will not benefit the pupil in other subjects unless he has established the *ideal* of exact observation, the emphasis in the laboratory work should be both upon the thing observed and upon the development of a *conscious* habit of observing all that exists and goes on around him. This, after all, is the scientific attitude of mind — the mental reception of all that is, an appreciation of things as they are, to the end that, if possible, improvements shall be made for the benefit of mankind. The scientific style is one of exactness, terseness,

[1] Bagley, *The Educative Process*, p. 216.

and completeness of expression, and of holding to the point under discussion. This ideal of scientific style should be insisted upon not alone because it is a necessity in science work, but also because it is most desirable in all written and oral expression in any line of endeavor. It must be remembered that the scientific attitude, the scientific style, in fact, the scientific method in general, does not find its entire field in science. It is the correct method for all education. "Scientific thought is no more the province of the physicist than of the philanthropist; it no more belongs to botany than to ethics; to diatoms, than to the Decalogue."[1]

Finally, the laboratory offers conditions which test the pupil's ability to overcome difficulties. If these conditions are controlled the results will be most beneficial to the pupil. After the very beginning the joy of being a cause, the exhilaration of the conqueror if you will, is self-propulsive, and he is carried on to further endeavor until he acquires the ideal of surmounting difficulties and of solving problems. This is the ideal of civilization — not the easy, soft, and debilitating life, but the active and thoughtful overcoming of obstacles.

If the laboratory work is to function in the highest degree, if the ideals of conduct are to be developed to the greatest extent, there must be much greater freedom for self-expression and self-activity in the laboratory than in any other department of learning. If there is not sufficient freedom the work will be stilted, tending to become artificial, superficial, and perfunctory in its nature. Of course, this freedom must not develop into license; it must be limited to that which will produce the greatest efficiency but, since one of the ideals of conduct is democracy, it should be self-controlled — the pupils must be taught to respect the rights of others. The best test for the right amount of freedom in the laboratory is found in the quality of the work which is accomplished. Moreover, if the experiments are adjusted to the ability of the pupils the work itself will be more desired than any kind of play.

WRITTEN RECORDS OF LABORATORY WORK

The usual method of the laboratory almost always includes the writing up of the experiments in notebooks. While it is practically unanimously agreed that notebooks are so important as to render them indispensable to the laboratory work, yet the results which have been obtained through their use have been quite generally unsatisfactory. There is no doubt that the pupils find the writing of experiments a bore, and easily become tired of what to them seems useless work; if much detail is demanded by the science teacher, the experiments are still more detested. Nevertheless, the written work of the laboratory is much too valuable to be abolished; in it lies the culmination of many of the ideals which may be established in the laboratory.

The writer investigated the conditions under which science was being taught in the grades[2] and found that eighteen per cent of those educators

[1] Boone, *Science of Education*, p. 186.

[2] Rowell, "The Status of Science Teaching in the Elementary Schools of the United States," *Elementary School Teacher*, Vol. XIII, No. 8.

who answered the questionnaire (282 in all) believed that formal records should be made of the experiments from the beginning of science work, while twenty-two per cent believed that this record should commence in the seventh grade. This percentage may seem small, but each grade had its advocates, the next smaller per cent being in favor of the sixth grade — ten per cent. It may be taken, then, that in the opinion of a large number of educators the seventh grade is the place for introducing written records of the laboratory work. If this is so, and, since it is acknowledged that written work in the laboratory has proved unsatisfactory, either the majority of teachers are wrong or the fault lies in the methods of writing up the experiments.

One attempt has been made to produce a more satisfactory record of the laboratory work, but it has developed a class of blank fillers. This is the printed experiment in which there are blank spaces to be filled in by the pupils. The result from the use of this method is that the pupils have become a sort of clerk, with all their attention directed to the proper filling of blank spaces, with little thought about the meaning of the whole affair. The chief value of having written records of experiments lies in the fact that *on account of the mental processes required to express in writing what has been done, the pupil becomes to that extent educated.* If this opportunity of expression is removed there remains little of value in the written record.

The student of psychology will recognize the fact that expression is individualistic. Therefore, if the best expression of each pupil is to be obtained, there must be no set method of written reports. The general requirements should be to do five things; the specific method of accomplishing these should be entirely individualistic, according to the developing ideals of scientific habits. They are: (1) Tell (2) what (3) you (4) did, and (5) state the lesson learned, or draw conclusions. At first glance these requirements seem to be only two in number, yet the initial four are each distinct and important. To *tell* is the principal aim of the written work; *what* to tell requires judgment and selection; the part that the pupil (*you*) plays in the experiment is more valuable than that played by some other pupil, or even by the teacher; the record should contain only what the pupil *did*, not what he read, or thought, or heard, or believed. The experiment should not be copied from any text; it must be what the pupil himself experienced. Finally, there should be a brief statement of the lesson learned. Here again, the lesson learned should be from the viewpoint of the pupil; he should know whether he has learned it; he should never be told what he should have learned, or he never will learn any distinct lesson from his laboratory work.

LABORATORY RECORDS SHOULD NOT BE GRADED

It is not a good plan to grade the subject matter of the laboratory work; the test of the pupil's knowledge should be made in the recitation and in the examination. The finished written work is no index of what has taken place in the brain of the pupil. This does not mean that the written work should be

slighted, for no unsatisfactory work should be accepted by the science teacher, and the pupil must be led to realize that the laboratory is a study room in which he is learning from things, and making a written record of things learned. The experiments, when written up properly, may be considered to a certain extent as evidence of work performed, subject to examination in the recitation. The value of the written work is subjective; it lies in the "*doing*," and not in the "done." As soon as finished, the records have lost much of their educative value.

THE AMOUNT OF LABORATORY WORK

It is hard to determine the relation between laboratory work and the recitation. Since the laboratory is a study room there should be a fair division of the time devoted to it, but, on the other hand, a large part of the recitation period is taken up with explanations by the teacher, and thus is not entirely devoted to the recitation. The division would seem to be determined better by the requirements of the science work rather than by any plan of programming. If definite days are stated for laboratory work the pupils will not prepare any work for those days; this objection, however, is not valid in those states where home work is prohibited in the grades. In many schools the division of work is more a matter of convenience than according to any pedagogical reason — too often the curriculum fits the clock and not the pupil! Perhaps a good plan would be to have one lecture, two recitations, and two laboratory periods each week, with the understanding that the recitations and the laboratory periods are to be interchangeable, according to the demands of the subject matter.

SUPERVISED STUDY AND THE PROJECT METHOD[1]

ROBERT A. CUMMINS
University of Southern California, Los Angeles, California

The Project Method represents a synthesis of a number of ideas in the field of method, each of which has been rather fully developed and for the most part independently of the others. The ideas referred to are known under the various titles of "problem method," "type studies," "the socialized recitation," "vitalized education," "motivation," "the extended assignment," "self-activity," "supervised study," and the like.

The concept of the Project Method includes not only a synthesis of various methods but also implies the reorganization of the subject matter in each case to correspond to the requirements of real life situations.

The Extended Assignment. It has been shown to be a perfectly safe step in classroom procedure to enlarge and emphasize the assignment. This is particularly true in case of large topics, which require several days or weeks to

[1] All rights reserved by the author.

complete, as, for example, the assignment of an epoch in history, the subject of decimal fractions in arithmetic, the New England states in geography, the circulation of the blood in physiology, the study of food-bearing plants in nature study, and other similar topics.

Time spent in outlining and making clear the task to be undertaken is not time wasted, as some have been wont to criticize, but on the contrary is a means to more effective teaching. Unless pupils have clearly in mind the aims and objectives to be accomplished they will likely waste more time in completing the task than would be required to make several extended assignments.

a. A good assignment consists first of all of a definite statement of the aims and objectives to be accomplished, the more specific the better. The statement of the aim not only serves to expedite matters in taking up a new piece of work, but furnishes a criterion by which to judge the progress made by the pupils, which in turn measures the efficiency of teaching. For example, if the specific aim is to learn how to spell correctly a certain 25 words, it is easy enough to measure the progress made as a result of a given number of minutes' study by giving the list of words as a timed spelling test at the beginning and again at the close of the study period. Or, if the specific aim is to master the fundamental facts of a typical volcano, a completion test or a set of judgment questions given at the close of the study will show to what extent this has been accomplished.

b. In the second place, a good assignment consists in adapting the subject matter to the individual capacities and interests of the pupil. The different products of a given state, for example, will catch the interest of the different members of the class and their varying abilities may be recognized in the amount and quality of the work done. Or, for example, each pupil might be allowed to choose his own selection of poetry to memorize rather than for all to be assigned the same identical lines by the teacher. By this means a lively interest in literature may be developed, whereas by the formal traditional method the entire procedure is usually a bore and not infrequently degenerates into a mere farce.

c. Then, a good assignment should include an actual start on the part of each member of the class toward the goal set up. This requires more time and more help than is usually devoted to the assignment. In making an assignment in a foreign language, for example, the teacher should endeavor to have each pupil work out the translation of a sentence or so. If it be a spelling lesson, one-half of it can be learned by the pupils while the assignment is being made. In case of a geography lesson, the pupils should be led to find the important points and fix these in mind during the assignment, etc.

d. Lastly, a good assignment should include definite considerations of the relative importance of the task to be undertaken and the probable amount of effort and time that will be required to complete it.

The Socialized Recitation. Another safe step toward the achievement of the "Project Method" in education is the socializing of the recitation. This is not a new feature, however, as many

teachers have for years carried out this idea in the classroom.

The fundamental principle of the socialized recitation is that the pupils should be made to feel that they are working as a group and not as so many individuals. This condition may be brought about in the lives of the pupils through various means, for after all it is not so much the particular thing that is done as it is the way in which it is done. In other words, the essential consideration in the process of socialization is that of *attitude*. The following features have been found helpful in developing the proper social attitude on the part of the members of a class:

a. Breaking up the formal seating arrangement of the pupils and turning the classroom into a *workshop*. This idea can be carried out even though the activities of the class are largely mental. For example, the writer with the cooperation of a college class provided movable chairs to take the place of stationary seats found in one of the recitation rooms of the college, added a large table in the center of the room, which served both as a reference table and as a work table. A class in the study of historical geology thus met in a more or less informal manner during the semester and *worked out* the course together, making charts and other concrete representations of the subject matter of the course.

b. Making topical assignments to small groups and allowing them to work out their own form of report to be made to the class is another feature of the socialized recitation. In a course in history, for example, it is not at all necessary that all pupils study the same pages day by day, in order to get value out of the course. In many cases the class as a whole will learn more from a group report followed by a brief discussion than they would should each one be required to read the pages with a view to answering a few specific questions the next day in the quiz.

c. Formulating questions themselves is another feature of a socialized recitation which has value for the pupils. It is a mistaken idea for a teacher to think that the only value in a recitation comes through the answering of questions. One may *recite* in many different forms. For example, he may answer a question put by the teacher; he may also answer a question put by one of his classmates, which perhaps would be quite as worth while. He may formulate a question for some one else to answer; he may perform some act of behavior representing what he has studied; he may exhibit an emotion through facial gesture, or otherwise; in fact, a pupil may *recite*, or give back what he has acquired by means of any kind of symbols. The responses of pupils may be classified as Oral Symbols, Written Symbols, and Other Signs and Symbols. In another sense the responses of pupils may be thought of as Monologue, Dialogue, Pantomime, or Dramatization, all of which may be used in the socialized recitation.

d. Grading their own work is a feature of the socialized recitation that can be employed in all grades and with any kind of subject matter with great profit to the pupils. For example, to have pupils exchange papers and mark them according to instructions given by the teacher not only increases interest

in the class but is a splendid means of further instruction in the subject being taught. It also affords opportunity for incidental instruction in the more important matter of judging samples of work done by different persons.

In conclusion it may be said that the socialized recitation is the logical step leading up to *Supervised Study*. Having developed the idea of a socialized recitation with her class, the teacher is enabled to leave her desk and move about the room as occasion may demand, thus taking the first steps in the capacity of a *director*. It is an easy transition from the socialized recitation to the plan of supervised study, since the efforts of pupils to plan and give their own recitations will often show the need of some instruction on *how to study*.

SOME UNNOTICED ASPECTS OF THE SCHOOL USE OF PHONOGRAPHS

STEPHEN G. RICH
Principal, Essex Fells Public Schools, Essex Fells, New Jersey

THE CHOICE OF THE SCHOOL PHONOGRAPH

It is no longer necessary to follow the claims of the advertising literature or the skilful salesman for any one make of phonograph in choosing the machine for school use. There are now a fairly large number of good makes of machine; and the only question that should be involved is that of getting the greatest possible usefulness for the sum expended. It may be laid down at the start that a cheap machine, costing under forty dollars, is likely to be unsatisfactory; and that, at the other extreme, a machine costing over a hundred dollars is not likely to repay the extra cost in extra service.

The writer, who was the pioneer user of the phonograph in school work in South Africa (1917) during his residence in that country, has had sufficient experience with the various kinds of machines in school use to believe himself a fairly competent judge in this matter. His experience leads at once to the conclusion that the school phonograph must, above all else, be portable. The large cabinet machines which are seen in quite a number of schools are primarily defective in that they lack this quality. Even in a Gary plan school there are bound to be times when the machine will be needed in some classroom rather than in the auditorium or the music room. Portability does not necessitate a cheap-looking or an inefficient machine, or one with an old-fashioned horn. There are now turned out by almost all the makers excellent machines which are substantially the upper portion of a cabinet machine without the lower compartment for holding records. Such machines have the full acoustical advantages of the cabinet machine, without the clumsiness; moreover, the use of a good solid table or of a teacher's desk as support

for the machine may often serve to improve the tone by the action of the table or desk as a sounding-board.

The use of the "portable" machines proper — those that are designed for camp and outdoor use — is probably not advisable. One of the chief drawbacks of these is that for school purposes they are not sufficiently perfect in acoustic construction to serve the needs of the situation.

In the same way the small machines, hornless, but with the working parts in the open above the turntable, are far less desirable than the machines with a cover. To take two well-known makes as examples, the desirable type of machine is that exemplified by the Edison "Chalet" model and the fifty-dollar Victrola.

In picking out the school machine it is of decided advantage to get one with as long-running a motor as possible. There is one make of machine (I shall not mention it, as I am not a salesman for any company) which is equipped with a motor that will play five twelve-inch disks at one winding. The ability to avoid even the mild interruption of the pupils' attention which the winding makes is not to be considered as unworthy of notice.

The phonograph that is chosen for school use should not be limited in its range of possible playing; it should be equipped to take as many of the different systems of records as possible. Although the great majority of the desirable records are of the ordinary "sidewise-cut" type, played with steel needles or semi-permanent styli, there are nevertheless occasions on which it is very useful to be able to play the "hill-and-dale" types, both the sapphire ball-stylus type and the diamond-point type. When violin music is to be used extensively, the fidelity of reproduction is quite as important as the fame of the player; there are a number of violin records in the diamond-point type that for complete rendering of the violin tone are distinctly superior to the best records from the best players in the other types. Certain records in this type, of vocal solos and of concerted work, are unusually clear in enunciation, and have thus great advantages for school use. Although one company making "sidewise" records has specialized in educational record-making, the choice of material is not necessarily or even desirably limited to these "educational records"; it will be found that even one or two of the selections thus labelled may be found better recorded on another system.

But it is not necessary that the phonograph shall be able to play all makes of records with merely a turn of the sound-box. Practical experience has shown the writer that the changing of sound-boxes is hardly any more trouble: off with the "Edison" and on with the "Brunswick" is perfectly simple and as easy as twisting the tone-arm to turn the sound-box. The machine should, however, have the needed accessory mechanism for all types. There is one type of record which requires a mechanical cross-feed or guide for the tone-arm. Some machines have a sound-box for this type of record, but no mechanical feed; this results in the jumping of the sound-box across one or more lines of the record at the least jar, with a spoiling of the music.

Nothing is more unsatisfactory than purchasing the school phonograph by merely ordering one. The machine should be picked out by the most competent judge or judges of phonographs in the faculty, or by some competent outsider not an agent for any maker. Far more important than the choice of the woodwork and appearance is *the choice of the sound-boxes*. Even in the phonographs of highest quality and in the one make that has the greatest reputation for uniformity of quality in its sound-boxes (reproducers) there is noticeable variation in the clearness of tone, freedom from scratch, and loudness or softness, of various sound-boxes that look exactly alike and are made with the aim of having them exactly alike. The tone of the machine is influenced much more by the quality of the sound-box than by the woodwork of the resonance chamber. The person picking out the school machine should insist on trying out several sound-boxes of each type that will be used on the machine, and should pick the one of best tone in each kind. The question as to whether loud or soft sound-boxes are best must be left to the local needs for decision. It will often be found that the sound-box used by a dealer on his demonstrating-machine for playing records to customers will be the one giving the best rendering of the records. A little tarnish of a part of the metal, the mere fact that the sound-box has been used for a few months, or the fact that it is nickel-plated when the machine that is to be bought has gilt fittings, should not be allowed to interfere in any way with the choice of the clearest and best sound-box that can be obtained.

The fact that the large cabinet machine is not to be chosen may lead to objections on the ground of there being no place then in which to keep records. Usually the cabinet machine has albums for records. The album-system is not the most safe method, for it does not protect the records when they are carried around in the school; it is not the most convenient, for it requires either removing records from the albums if only one or two are wanted from each album, or else the carrying of the albums.

A far better scheme is to keep each record in an envelope of very heavy manila paper, of the same quality as that used for folders in filing-cabinets; the name, performer, etc., are written on the envelopes; the envelopes are numbered, indexed like books in a library, and stored on a shelf like books. To carry records about, boxes exist, or can be made if not locally available, with grooves into which the envelopes containing the records slide. These boxes have hinged covers and strong handles; the safe carrying and easy handling of records is fully provided for by their use. The making of the boxes is not a difficult project in woodwork; the making of the envelopes is an easy matter to anyone who can use scissors and glue.

To sum up the section: get a medium-priced, portable machine of the type that has a cover over the working parts; get a machine that runs long at a winding; get one that will play properly all makes and kinds of records; choose the sound-boxes carefully; and get envelopes and boxes to hold the records.

SOME MEANS FOR GETTING BETTER RESULTS

There will probably be some objections raised to the proposed devices in this section. They are based on the writer's experience, and, however unusual they may seem, they have proved effective. The most relevant objection will be: "Why, if these are so good, do not others use them? Why do not the phonograph companies advise them?" The replies will appear in the course of decribing each of the practices to be suggested.

Experiments, conducted in several different classrooms in two schools in South Africa in 1917 and 1918, and in this country in 1922, showed me that a classroom or a hall full of students usually could hear the finer distinctions of tone and the enunciation in vocal or spoken records somewhat better as the phonograph was placed higher and higher from the floor up to a distance not over six feet. I did not try it beyond this distance. I had made for myself, when with the Amanzimtoti Institute, in Natal, South Africa, a table five feet high, of just the size to hold my machine. By using this table, I was able to get the mouth of the tone-chamber at about the level of a tall man's head; the results in good hearing of the records by the class were the most successful I have had. At the Edendale Training Institute, in the same province, the next year I used a chair on a table, with almost equal success. In outdoor use of the machine, for music in connection with calisthenics, I was fortunate in having a high bank alongside the drill-ground; on this I placed a chair to hold the machine. The carrying-power of the music was much increased as against that found when the chair was placed on the edge of the drill-ground.

The next point will probably meet with greater opposition. I state that several years of school use and over a decade of private use of the phonograph have convinced me that the machine should be turned *with its back to the audience*. The sound is always clearer, and the scratching nearly always less, if the sound is reflected before it reaches the hearers. The best effects are secured by reflection from a wooden door, but a blackboard is almost as good. If the machine is placed near one corner of the room, and set facing the wall, but slanted about thirty degrees away from directly facing the wall — thirty degrees towards the side away from the nearest corner — the best conditions are obtained. The pupils, if not told why the machine is set this way, will ask at first why it is done. The usual procedure of having the machine face the audience is only an unthinking inheritance from the days when we had no phonographs, and when we had naturally to look at the performer. Without exception, competent judges of music, hearing the machine alternately in the customary and the new position, have agreed that the new one gave more natural reproduction, with only a very slight decrease in volume of sound.

A third means to secure better results is to use a variety of needles on the records that allow of it. The envelopes containing the records may well be labelled, "Use ——— needles." Curiously enough, some records, ostensibly

loud ones, are not at all satisfactory with the full-tone needles; any record that is not satisfactory at first may usually be made more satisfactory by experimenting till the right needle for it is found and adhered to.

The customary procedure of using one kind of needle or one stylus for every record is thus a most undesirable one. As a practical matter, the writer has found that full-tone and half-tone needles of steel, half-tone brass needles (the kind that play five to eight records without needing renewal), and half-tone styluses are a sufficient assortment.

But the needle that gives the best results may make the record play too loudly to get the desired effect. There are other methods of regulating the sound. Not all machines have the really effective method built into them, however. A number of makes control the sound by devices placed at the back of the resonance chamber; this is the most effective method and the one that distorts the sound the least. For machines that lack regulating-devices or that depend on doors, a satisfactory substitute is to place a handkerchief, crumpled up more or less tightly, in the neck of the resonance chamber. Those who have machines with horns may, of course, put this in the neck of the horn.

I now come to the point at which one must, for best effects, often go directly against the instructions of the makers of machines. Although the normal speed for most makes of records is 78 revolutions per minute, there will be found occasional records in all makes that are the better for being played either faster or more slowly. For example, the "Morris Dance" and "Torch Dance" of Edward German are esthetically better if speeded up as much as the machine will allow. The "Hall of the Mountain Kings" in Grieg's "Peer Gynt Suite" is another selection that improves with additional speed. When it is desired to get the greatest clearness of enunciation, as in records for teaching languages, considerable benefit is often to be had by slowing the speed to 72 or 70 revolutions per minute.

It might be well to add that the great majority of phonographs, after some months of use, tend to run a trifle fast. The speed should be tested and the necessary change of adjustment made; the speed-indicator will probably show the speed as less than it actually is, and should be covered with a piece of paper glued over it, with the correct speeds shown. The speed may well be tested at least once each semester.

UNUSUAL RECORDS AND UNUSUAL USES

The suggestions in this section are given merely as samples to indicate what can be done; all of them are derived from the writer's school and private use of the phonograph.

In 1919, the writer taught a ninth-grade class in English; the text used was "The Surprising Adventures of Ulysses" (title may not be given exactly), a British book. When we came to the episodes of Scylla, Charybdis, and the Sirens, the class wanted to know what the Sirens' songs were like. They were told, "We have not preserved these songs; but there are phonograph records of songs that produce similar effects. I will play you one, so you can know the kind of song

it may have been." Next day I brought in the machine and a record of Charpentier's "Depuis le jour," from the opera "Louise." Both in its musical make-up and in the situation in which it occurs in the opera, this is justly entitled to stand as a modern example of a Siren's song; it satisfied the students completely — so much so that I was often asked to give it when I gave the school "Gramophone Concerts," as we called them in that country (South Africa).

The visual aids to the study of history can be supplemented by the aural aid of relevant records. There exist records of the "War Song of the Crusaders" and the pathetic "Duke of Marlborough" to make more real the period of the Crusades; the Reformation is represented with Luther's "Ein Fester Burg" and perhaps half a dozen other selections; a fair number of Restoration songs, illustrating that phase of English history, are to be had; our own songs of the Civil War period are represented in the list; and for the modern period, the World War is embodied in "Tipperary," "Keep the Home Fires Burning," and "Over There." Let not the supposed musical faults of these last three blind us to their historical significance! The teacher who is seeking the records for this service in history-teaching must not, however, limit himself to the records labelled "Educational." He is quite as likely to find the desirable records in the general lists of the various makers.

Another phase of this, and one that bears on the study of geography equally well, is the use of records typifying the music of various nations and peoples. Several companies have special lists in the various languages or for the various nationalities. A judicious selection from these may be used to illuminate the study of geography as well as of history. I might mention that one American recording company has a large Philippine record-list; that one company in England has Hindu records, and another there has records in South African Dutch, Zulu, Xosa, and other South African languages; and that I have seen Chinese and Japanese records on sale in New York.

The various dialects and pronunciations of our own language can be illustrated fairly well with records. Some of the Scotch records have a fair amount of talking in them, illustrating the Lowland Scots' pronunciation and turns of speech; there are recitations by great English actors to be had in some of the American makes of records, to illustrate British speech; the recitations of Percy Hemus give us the American Middle Western speech at its best; James Whitcomb Riley's recitations of his own poems show us Indiana localisms of pronunciation; the New England and the Southern modes of speech are not absent.

Recently the writer taught in a normal school near the border of Virginia, but not in that state, in which it was the custom for the faculty-members to take chapel in rotation, and to have students participate in the exercises. There had been great difficulty in getting a musical number by a student for every week's chapel; the phonograph solved the problem for the writer. He armed two students with violin records;

he then announced: "Musical ability is sometimes found in the most unexpected places. None of you may have suspected William B—— of musical ability, yet he will give us a violin solo." B—— came up on the platform, put the record on the machine, set the phonograph going — and won applause. After the speech on the subject of the day, this announcement came: "But there is still more unknown musical talent among us. Harold P—— will also give us some violin music." He gave it — on the machine; he also was well received. This plan is commended to those who cannot find enough musical ability in the school for all needs.

A SIXTH-GRADE PROJECT AND ITS VALUES

BERTHA M. ROGERS
Supervisor of Kindergarten and Elementary Education, Janesville, Wisconsin

This article centers about the following four short compositions written for a group of teachers by pupils in a sixth grade.[1] These compositions formed part of a bulletin which also included one other group of similar compositions written by the same pupils. In each group the children aimed to explain their method of working out a series of large language units pertaining to a play which they previously had adapted from a reading selection taken from the novel, *Les Miserables*, and which they had acted for a Christmas program.

A SERIES OF SIXTH-GRADE WRITTEN COMPOSITIONS

Explanations of procedures followed in developing a group of explanatory compositions.

PLANNING OUR WORK

When we wanted to write an explanation of how we worked out the dramatization of "Little Cosette," we first planned how many compositions we should need to write. We thought we should need to write only six compositions, but later found we should need to write seven.

G. S., February third.

ORAL COMPOSITIONS

Before we wrote each composition, we had three or four oral compositions to give us a hint of what we should write. They were given also so we could see if they were good or poor and if we could make them better.

M. A., February eighth.

CHOOSING OF COMMITTEES

After all of the compositions were written, we chose two committees of five each to select one good paper out of nine or ten of the best papers from the set. The names of some good composition writers were put on the board. They were selected by vote. The pupils were to select the one best paper out of nine or ten in each set of papers.

G. S., February ninth.

JUDGING THE PAPERS

In the judging of the papers the class decided that the standards in judging them should be the appearance and the English. The appearance included the headings, margins, and writing. The English was to be judged by the sentences, the spelling, and the choice of words.

N. G., February tenth.

[1] Teacher, Teresa Baker, Garfield School.

SIGNIFICANT ELEMENTS

The following discussion aims to point out the worth of some of those factors which are pertinent to the procedure indicated in the above records and which are essential to a project. The particular illustrations in themselves are unimportant; their significance consists in their relatedness to certain ways of learning which are usual to a group activity.

The distinctive characteristics of a collective activity depend upon the ideals of conduct common to those individuals within the social group. These demand for successful fruition, under normal conditions, an interchange of intelligent thought, which in effect makes life better worth living for the group. This implies that its members enjoy a community of interests that result in coöperative production. These factors — intelligent thinking, a common purpose, and social ideals — the work of the school usually lacks.

Let us examine, therefore, these simple compositions with the aim of ascertaining if they reveal at least phases of these elements. If we discern their presence it is probable that the work of this class tended to give to the pupils a social sense of their own powers through those relationships common to a democratic situation.

AN ACTIVE POWER

The driving force of the children's purpose lay in their instinctive desire to recount experience. For the class prepared these little compositions at the suggestion of the supervisor for the purpose of distributing the series in bulletin form among the grade teachers of the city. This aim represented a definite achievement of immediate importance and so it had a sense of reality to them. Because of their interest in the end to be accomplished, the facts pertaining to language study, such as sentence structure and choice of words, were for them tools to be used to attain their common purpose, namely, the writing of compositions of such merit that their peers would judge their compositions acceptable to a large audience. Because the purpose and the progress of its fulfillment concerned the interests of the group as a whole it was, in its nature, social.

A FORWARD LOOK

The first composition of the group indicates that at the outset the pupils took a forward look, during which time they made some decisions concerning their exact objectives. For example, "When we wanted to write an explanation of how we worked out the dramatization of 'Little Cosette,' we first planned how many compositions we should need to write." The uniformity of their finished compositions suggests that they at this stage decided also upon the length of their compositions, the standards for judging the points of excellence, and the methods of selecting the particular compositions for the bulletin; in short, that they saw in imagination the entire labor from the beginning to the finished product.

The act of looking ahead is one of the essential features in the carrying out of any worthy purpose. This preliminary step should remain informal and at the same time become as definite as the

child's stage of development and the character of the work will permit.

COMPARISONS AND DISCRIMINATIONS

One of the chief values of this forward look, as exemplified in the children's records, was the working hypothesis which the pupils tested through execution and through the application of judgment to their work. For example, the first composition states that, "We thought we should need to write only six compositions, but later found we needed to write seven." To this extent at least the children's study was experimental.

The natural outcome of experimental study is the observation of new facts. The new facts in this instance may have related possibly to the character and the scope of the ideas involved in the children's summaries, the essential elements of their expositions.

Although this particular instance represents a simple form of reasoning, it is significant because the data used had a direct bearing upon the solution of the children's problem and were related to their interests, and so were relatively simple. Children's experiences are limited and narrow, but their logic is not always defective if they be allowed to reason upon experiences within their range of understanding. This implies that the teacher usually should not tell the pupil whether his reasoning is right or wrong, but should allow him, as the first record states, to "later find" whether he is right or wrong.

This is comparatively easy if the teacher, instead of putting in the children's minds her ready-made conclusions and her preconceived plans, will foster the impulse of intellectual initiative and the sense of responsibility to one's own ideals and to those of others within the group. Thus pupils will grow in power to study a problem independently.

Another illustration of this form of study consisted in the pupils' discrimination with respect to the product of their own thinking, for they selected "the best paper out of nine or ten in each set." They also determined for themselves the values by which they judged the excellencies and weaknesses of these compositions, for "the class decided that the standards in judging would be the appearance and the English."

In these ways the compositions afforded the pupils opportunities for the forming of independent judgments with regard to the execution of their undertaking and the wisdom of their plans.

The children's records also indicate that the procedure involved a type of exercise somewhat uncommon to this sort of class work, namely, thoughtful drill. Moreover, the drill was of an unusually good type, for the children recognized, it appears, that practice was a necessary step in the fulfillment of their purpose. The fact that they practiced "three or four oral compositions" indicates that the drill was short. This was as it should have been; children cannot long remain alert on the technicalities of language, for these lack intrinsic interest. In their attempts to make their compositions "better" it is safe to assume, if we consider the qualities of the compositions, that they applied the standards suggested in the last composition, which relate to

the organization of composition, sentence structure, and the choice of words. Whenever they made such connections these tended to become fixed in a chain of associated ideas and so to become a part of the mental equipment and therefore educative.

PERFECT STANDARDS

The fulfillment of the purpose stimulated emulation and provided practice in self-determination and mutual helpfulness, which constitute some of the essential elements of good citizenship.

Among the spurs to social endeavor are the natural desires to excel and to give assistance. This the work did not lack, for the second composition states that some pupils gave three or four oral compositions "to give us a hint of what we should write"; and that "we chose two committees of five each to select one good paper out of nine or ten of the best in each set." Those pupils whose papers the committee did not select had the satisfaction of having contributed help and of having rendered service in the preparation of the coöperative product. In the words of the Boy Scouts, they felt the gratification of having done a "good turn."

In the choice of committees the pupils exercised a degree of self-determination, for the records state that the "good composition writers were selected by vote," and that "committees" selected the best papers. Inasmuch as the selection of the committees depended upon their abilities in the line in which they were expected to judge, and the selection of the composition depended upon the degree to which the compositions met the standards set by the class, it is patent that this stage of the work exemplified both intelligence and also a final moral ideal — coöperation between groups. The need in this world for training in intelligent leadership and in coöperation in social lines is evident.

The continuous application of ideals to conduct results in the development of standards which give point and direction to courses of action and directly affect the lives of individuals and of groups. The awakening and nurturing of ideals is the greatest work of the teacher.

SUMMARY

It is possible to perfect the sort of method which has been analyzed if one will thoughtfully consider that the best kind of teaching includes a worthy purpose which has its source within the child, or touches the child's interest and experiences. This sort of purpose guides thinking, directs the examination of the plans and the materials, elicits appropriate suggestions during the execution of the plan, and tests the suggestions or judgments. It provides a natural setting for the formal type of work called drill; and it makes possible conditions under which, with a skillful teacher to guide, the child can exercise those qualities essential to character formation.

AN EXPERIMENT IN MARKING FIRST-TERM COMPOSITIONS

ROWENA KEITH KEYES
Head of Department of English, Haaren High School, New York

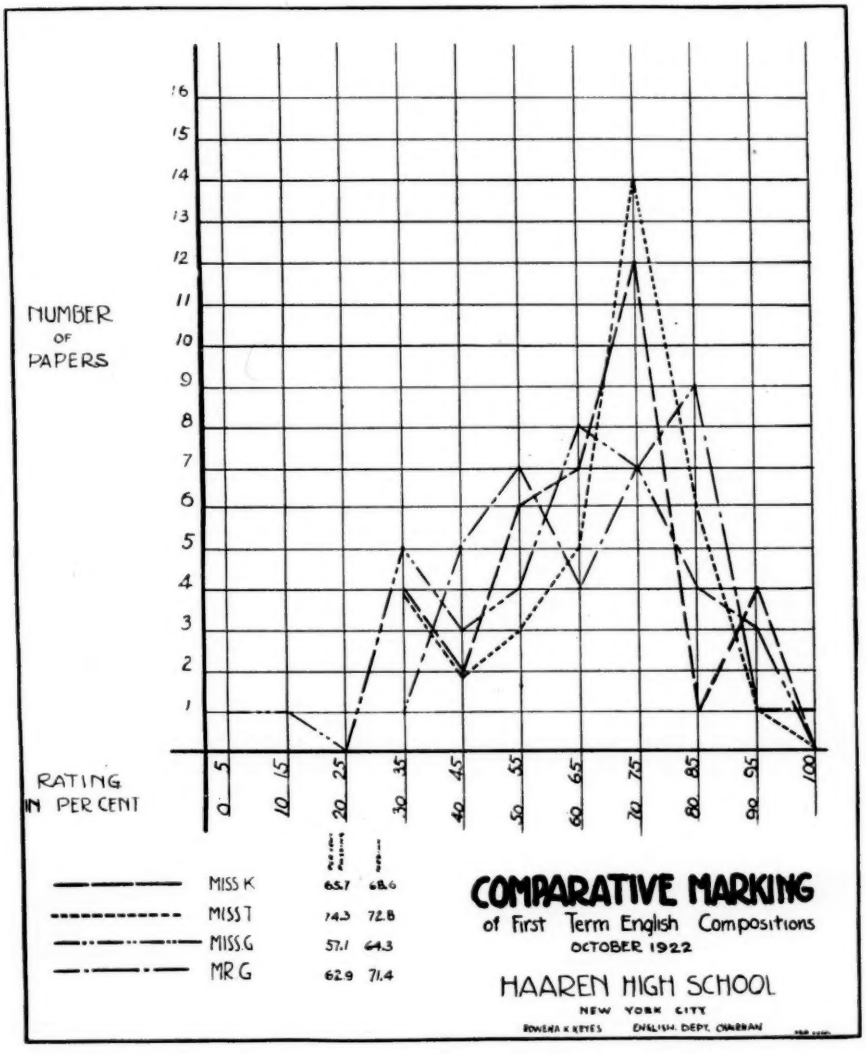
The application of measuring scales in English composition has been a matter of wide experiment. We all know that a number of carefully rated scales have been prepared both for compositions in general and for each type of composition. The difficulty in their use seems to be twofold. First, there is in all composition work an indefinable quality which is almost impossible to scale. Matters of form must really be subordinate to matters of thought, and while human nature is human nature, judgment will vary widely in this matter, partly because the subjects for compositions are as varied as life itself. Second, types of compositions are very different, according to the class of pupils who are writing. It is almost impossible to compare the work of East-side New York children with that of New Englanders. In characteristic mistakes, in subjects of imaginative appeal, and in the subtle matter of style there is almost no comparison possible.

Having found these obstacles very real ones in the path of the use of scales among the teachers of my English Department in the Haaren Coöperative High School, I decided on a very humble attempt at scientific unifying of our first-term marking.

The marking of first-term English composition is particularly important because the progress of the pupils through the rest of their course is partly dependent on the start made in the first term. To determine the ability of the pupils to write when they first entered high school, a uniform test was given, half an hour being allowed for writing a simple story, entitled "My Greatest Surprise" or "My Greatest Disappointment." Each teacher who had first-term pupils was asked to give to the Head of the Department about 25 papers of all degrees of merit. From these she selected 35 papers as varied as possible. These 35 were then marked by each of the four teachers of the Department, on the basis of 100, the possible marks being at intervals of 5. Each teacher then handed to the Head of the Department a sheet showing the mark for each composition, arranged so as to show the rank of each paper and also the per cent given it. The marks given by each teacher were afterwards grouped to show how many papers were marked in the 60's, how many in the 70's, etc. From these data the graphs were made to show the tendency of each teacher in marking. The median was calculated and the per cent of pupils passing.

The graphs were prepared by Mr. Fred Siegel, teacher of Drawing in the school.

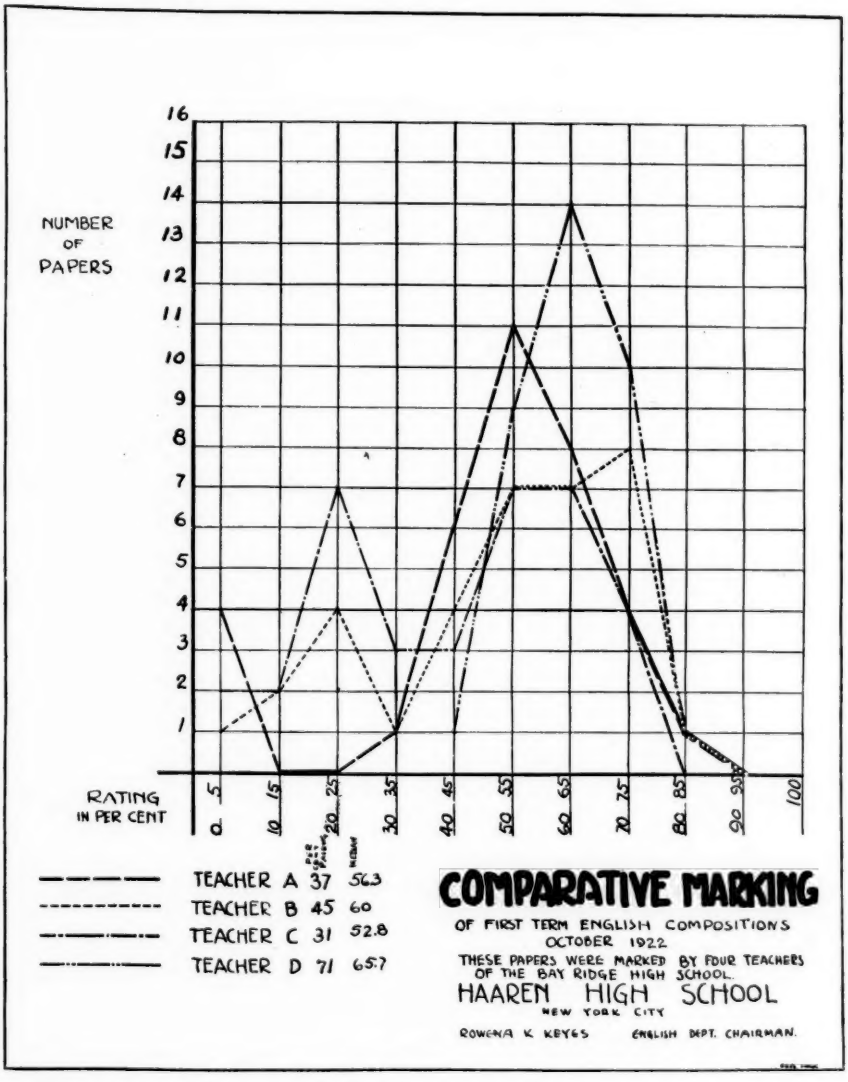
The same experiment was tried in Bay Ridge High School; these papers were exchanged with those of Haaren



and the marking was similarly recorded and graphed.

The results of the whole experiment have been as follows:

1. Papers which were marked with a very wide divergence of judgment were selected to be marked again by the teacher in question. Where the judgment was not reversed the papers were discussed and the reason for difference of opinion was found. From this procedure we developed certain fundamental standards for marking first-term papers.



2. The papers which were most uniformly rated 50, 60, 75, 90 or below 50 were chosen to form a type scale to help new teachers in estimating the value of compositions.

3. Junior High School teachers were invited to share in a conference as to the result of the experiment, and coöperation between the Senior and Junior High Schools was thus promoted.

4. Teachers whose medians were specially high or low or whose lines were erratic were cautioned as to correction of such tendencies.

THE CLEARING HOUSE

GREETINGS FROM THE PRESIDENT OF THE NATIONAL EDUCATION ASSOCIATION

To be President of the National Education Association is to represent the greatest body of teachers in the world. It is to accept a solemn trust that lifts one above the ordinary responsibilities of locality or group to broader duties to the profession as a whole and to the Nation. In accepting this trust I dedicate myself to the service of the entire Association and the profession it represents. The Association has an efficient headquarters staff upon which I shall rely. It has a well-conceived program which shall be my program. It has an outstanding mission to which I shall give my best and for which I bespeak the enlistment and whole-hearted coöperation of the teaching profession. The cause of education is the foundation upon which we can unite to build a greater profession and a greater and better Nation. — OLIVE M. JONES, *President of the National Education Association.*

A HABIT CURRICULUM FOR THE FOUR-YEAR-OLD OR THEREABOUTS

The environment of a little child is meaningful, and offers opportunity for growth, if appropriate and definite behaviors are established as he progresses in experience. Mothers are more and more defining for themselves those outcomes in the training of pre-school children which will help them make the desirable progress. Both the presence of bad habits and absence of good habits are limiting obstacles. Attention to the forming of good habits in the home will free the child's attention to the more complex skills of his beginning school life.

The following lists of skills and behaviors for the four-year-old or thereabouts is suggested by the class in Child Education (307), University of California Summer Session, 1923.

M. MADILENE VEVERKA,
Los Angeles, Calif.

I. Health and Cleanliness Habits.
II. Physical and Manual Skills.
III. Social Behaviors and Courtesies.
IV. Language Habits and Abilities.

I. *Health and Cleanliness Habits*

1. Sleeps eleven hours a day.
2. Rests an hour or so each afternoon.
3. Goes to bed and rises at regular hours.
4. Brushes teeth at least once a day — regularly — at bedtime.
5. Has bowel movement at least once a day — regularly.
6. Washes hands after toilet.
7. Has cleanly toilet habit of flushing toilet — use of paper.
8. Has own towel, washcloth, brush, and comb.
9. No bed wetting.
10. Eats regularly.
11. Eats some hard food every day, as toast.
12. Drinks milk every day — no coffee, no tea.
13. Chews food well, eats slowly.
14. Drinks water freely — never from public cup.
15. Drinks when mouth is empty of food.
16. Puts only food into mouth — no toys, pencils, etc.
17. Likes a variety of foods.
18. Puts no picked-up candy, gum, fruit, or food into mouth.
19. Eats candy only on permission.

20. Washes hands before eating.
21. Keeps hands from mouth, nose, ears, and sex organs.
22. Does not bite fingernails.
23. Does not spit — if necessary, into handkerchief.
24. Breathes through the nose — no obstructions.
25. Has at all times, and uses properly, a handkerchief.
26. Covers mouth when sneezing or coughing.
27. Has at least one soap bath and shampoo each week.
28. Plays out of doors every day, regardless of weather.
29. Asks for open windows in sleeping room.
30. Likes to sleep in the dark — is not afraid in dark.
31. Does not walk into water with shoes on.
32. Dresses self — essential things.
33. Buttons and unbuttons clothing for toilet.
34. Does not play with strange animals.
35. Does not play on a thoroughfare.
36. Does not go near fire or play with matches.
37. Does not suck thumb.
38. Does not whine or cry unnecessarily.
39. Likes to play in the sand.
40. Likes to wade, go barefoot.

II. *Physical and Manual Skills*

1. Stands well, walks well.
2. Stands squarely on both feet when standing.
3. Can run, can skip on both feet, can jump, can hop.
4. Can climb — taking normal risks.
5. Can throw a ball, a bean bag, a stone.
6. Can catch a ball thrown to him — 5′ or over.
7. Can go up stairs, down stairs — both feet stepping.
8. Can swing, slide and see-saw.
9. Will attempt a hand spring.
10. Can climb a ladder.
11. Can use a spoon or fork at table.
12. Can play with blocks, carry, lift, lay down pile.
13. Holds scissors properly, can cut on line.
14. Carries or moves a chair properly.
15. Can carry objects — dish, pail of water, cup, glass — and not drop.
16. Can turn water faucet on and off.
17. Can hammer — possibly hit and drive a nail.
18. Can fold napkin, can fold paper simply.
19. Can use crayola on paper, chalk on board.
20. Can turn leaves of a book.
21. Holds own cup or glass when drinking.

III. *Social Behaviors and Courtesies*

1. Answers and comes when called by parent or teacher.
2. Says "Excuse me," "Thank you," and "Please."
3. Picks up things dropped by elders.
4. Tends not to interrupt.
5. Tends not to contradict.
6. Tends to pass behind people.
7. Awaits turn in line, in game and at table.
8. Is mother-weaned. Does not cry away from mother.
9. Does not strike, kick or bite.
10. Gets chair for teacher, mother, or guest.
11. Tends to wait on himself — gets own scissors, drink, etc.
12. Closes door quickly; closes doors that were closed.
13. Boys remove hats indoors.
14. Does not laugh at mistake or misfortune of others.
15. Makes up with children, plays with them.
16. Has a spirit to help others, especially young children.
17. Is gentle and kind with pets.

18. Hands knife, scissors, hammer, etc., with handle out.
19. Can shake hands correctly.
20. Is able to care for and amuse baby for some time.
21. Tends to keep busy in play and self-entertainment.
22. Is social — not afraid of strangers.
23. Can play with blocks beyond manipulation — creatively.
24. Can represent an idea by a drawing.
25. Does not mark books, walls or furniture.
26. Listens to directions.
27. Can follow simple directions promptly.
28. Enjoys flowers.
29. Likes to listen to music.
30. Sings.

IV. *Language Habits and Abilities*

1. Asks in sentences for what he wants.
2. Uses people's names, as, Miss Smith gave me, etc.
3. Hears constantly, "May I," "I saw," "I did," "This is I."
4. Tends to use above correct forms.
5. Knows his names and his home city.
6. Hears Mother Goose rhymes and participates in saying.
7. Able to name familiar objects in his environment.
8. Listens to simple stories and is encouraged to tell them.
9. Can imitate sounds of familiar animals — dog, hen, etc.
10. Speaks loud enough to be heard.
11. Tries new words and longer sentences in conversation.
12. Has a vocabulary of some 1,000 words, which is growing.
13. Appreciates a book as source of picture or story.
14. Shows a tendency to want to converse, to relate.
15. Has a good speaking voice.
16. Enunciates clearly — lisping, stuttering, baby talk gone.

A PROJECT IN THE THIRD GRADE

"The finest thing in Life is that which leaves us eager." The work that leaves the child eager is indicative of success in teaching methods. The Project Method, I believe, is proving its worth in this respect. By it imagination is stimulated, desire for further knowledge is quickened, skill is acquired, and most of all the child has the satisfaction of doing.

In the third grade of the Hewitt Street School — a grade composed entirely of foreigners — a project that is fulfilling its purpose is the one we call "Travel in Other Lands." By means of books, stereoptican views, freehand drawing, the making of posters, singing, and sand-table work, we travel in thought.

Recently we began with the story of the Pilgrims. For our first Thanksgiving story we left England with the Pilgrims and journeyed to Holland. Pictures taught us to know and understand the Land of Windmills. We read about it, made a number of freehand posters, sang of it, until we could *speak* about it — an achievement for timid foreigners.

We left Holland, sailed with the Pilgrims to America, and met the Indian. Again we traveled by stories, posters, pictures, and music into the Land of the Red Men. Mere words cannot convey the growth already apparent among the children. The shyest little Japanese, the most backward Mexican was beginning to feel brave enough to walk up in front of the class and talk of the countries which we had studied. And the bravest of them were willing to tell their stories to the Eighth Grade when invited to visit their Story-Telling Hour.

This carried us well into December, when we went to the little town of Bethlehem to learn the Christmas story, the reason why we cherish this time, and give gifts. In cold January, we stepped into an airplane and went to Eskimo Land. We sang the

Snowflake and North Wind songs, and looked at snow scenes until we felt we were in the far North. We made two large posters of snow scenes and Eskimos, which we tacked on the door. This is our Make-Believe Land. Then by reading, by singing, by art work we became familiar with the life of these people. A trip to the Public Library was a new inspiration, and we became acquainted with the Library and its treasures. A visit to the fur store helped us to know furs; on this trip we saw a stuffed bear and a white reindeer. This gave us an idea of the real size of the animals and the actual thickness of the fur. These experiences may seem simple, but one must remember how little there is in the lives and experiences of these children compared to the average American child. More books and oral story-telling led us on, and our Eskimo table grew into an Eskimo village, with a cotton igloo, a cardboard sled and dog team, paper snow and ice, with toy animals climbing over the ice. A doll clad in fur from head to foot made the Eskimo seem real.

The work led us continually on, and interest seemed unabated. The truth of Miss Salisbury's statement became more apparent, "The value of the Project Method is that it is so fruitful and lives on in something else."

Eager question, "Where can we travel now?" led us by choice to China and Japan, by way of ocean steamer. We are in those countries now, and the interest is as keen as ever. We are studying and comparing these countries because of their common interests, and their common industries of rice and tea growing and silk culture.

We begin to learn of each new country through stories. We are getting the "Library Habit," which is a new habit to our little dark-browed foreigners. The other day each one of us went home with two books, one on China or Japan, and the other a fairy tale. These books are kept on our browsing table, and when we have spare moments we read from them, and our spare moments are no longer idle ones. We use them for sketching or reading or manual work of some kind. Soon the Land of Make-Believe on the door was filled with Chinese and Japanese studies that gave a festive appearance to the room. When we learned of the Feast of the Lanterns, we made lanterns and hung them in the room. A trip abroad took us to the Oriental stores near the Plaza, and gave us new ideas. Twice a week we have been using our stereoscopes, and have traveled in China and Japan, and upon our return have told of what we saw on our travels. A second trip to the Public Library last week started more on the road to happy leisure hours by means of the borrowed book.

Our table has grown bit by bit from donations such as an apple box, a rice sack, some empty spools, two penny dolls, and some kimonas, until we have a Japanese home and a garden, a driveway lined with diminutive cherry trees, and a Japanese lady taking her airing in a jinrikisha.

The work grows of itself, and guidance keeps it in well-directed paths so that the course of study is not neglected.

The "so fruitful" phrase can be explained thus: in our handwork classes we are making hinge-covered books to contain sketches and stories of each country in which we have traveled. Charts showing food, shelter, clothing, and exports of countries are growing out of the work. Each child must be able to tell the class about his chart, so he is getting his English. A program is growing, too, and before we leave the country we shall have a party and invite some class to hear our stories, songs, poems, and records dealing with China and Japan.

The children are already gathering pictures and stories of their own accord from

magazines relating to Africa, Arabia, India, and America. So the work carries itself on and the eagerness grows.

In arithmetic we are buying tea, rice, silk, salt, furniture, and ornamental goods in our problems, consequently a new interest has manifested itself in arithmetic.

While no special effort is made to force all subjects into our project work, yet the children seem to gather materials from all which lend themselves easily to the project.

Best of all, these foreign children are acquiring a speaking and a writing vocabulary, which is their main difficulty, and they are developing habits and skills and knowledge which will help them "to live more abundantly, the ultimate objective of all education."

SOPHIA C. TUCKER,
Hewitt Street School,
Los Angeles, Calif.

GIVING TO THE HOSPITAL—A FIRST-GRADE PROJECT

Those of us who are fortunate enough to be working with little children are again and again reminded of their natural spirit of generosity. Most of them take great pleasure in doing something for others. Even though this is true, mothers and teachers invariably find a big difference in the degree to which little folks possess this characteristic and so they eagerly encourage in their children all evidence of this kind of spirit.

There is probably no time during the year (and more's the pity) when people think more of giving than at Christmas. A happy illustration of this occurred in our Training School.

It was the early part of December when the children of the first grade and their teacher were discussing plans for Christmas. At the beginning of the talk several people suggested taking something to the hospital in town, having a Christmas party at school, decorating the room, and so forth. It must be confessed that the teacher was surprised to have so many interested in the community hospital, but she soon learned that Frances had a grandfather there and Burton, Perley, and several others had been there as patients.

It was great fun for them to plan what they could take to the sick folks. Some said, "I think it would be nice to take some candy"; others, "I think they would like some oranges," and Burton remarked, "I'd like to take some ice cream. When I was in the hospital my mother brought me some ice cream every day." The teacher encouraged them to make other suggestions and asked that they think of things sick people might eat and things they would enjoy seeing or hearing.

Soon it was decided to take a basket of fruit, homemade jellies, and marmalade, and to sing some Christmas carols. The next few days were spent in bringing from home such jars as the mothers wished to contribute. Almost daily some little tot would ask, "When shall we bring the fruit?" or, "Mother wants to know if apples are all right."

Then there were the songs to be chosen, and a happy time they had during the usual music period learning "Silent Night," "The First Noël," "Jolly Santa Claus," etc. The children always enjoy learning new songs, but as they prepared these to sing to others the music assumed new importance and greater meaning. As the last day before Christmas vacation drew near, the class found that one large basket loaned by the teacher would not be big enough to hold the generous contributions, and so several offered to bring baskets from home. Five were needed to hold the gifts they had brought. The packing of the baskets was done by small groups. One had brought Christmas napkins, wrapping, and tissue papers. The children did won-

derfully well, packing the jars carefully and putting in polished apples and oranges. (Who ever polished oranges before!)

All had a chance to decide what would be written on the card going with each basket, and as the majority wished to say, "I wish you Merry Christmas," each (unless otherwise engaged) practised writing this message on small slips of paper, one of which was about the size of the card. The children chose the ones doing the best work to write on the Christmas cards. One little fellow punched the holes and helped tie the cards to the baskets, whose contents were covered with white tissue paper and later decorated with small sprigs of holly and black alder which had been contributed.

The children were now ready to discuss who would carry the baskets, and as they had previously selected a dozen of the best singers to carol, various ones in this group were asked to take the baskets when they went to sing. (It may be of interest to note that all discussions of any length formed a large proportion of the language work for the month.)

It so happened that the second grade, too, had planned to sing at the hospital and take games to the children, so both groups went together with the first-grade teacher. The afternoon was a rainy one, but all were prepared for the walk and each tried to help with an offered umbrella, or a strong arm to carry the baskets. When the hospital was reached, a cordial nurse asked them to come in and very quietly did all remove rubbers, greet the nurses, and quite soberly present the baskets, for the children were a bit awed by the strangeness of it all.

Then a nurse told where they might stand in the lower hall so that their songs could easily be heard. Soon the sweet strains of "The First Noël," "Jolly Santa Claus," and "Silent Night" floated through the corridors. The children were also asked to sing on the second floor, and when they returned to the lower hall they prepared to go home. As the baskets were returned a nurse asked, "Are the children willing to sing once more?" Of course they were, and in answer to a request sang very sweetly:

"Silent night, holy night,
All is calm, all is bright," etc.

Then amid a chorus of "Thank yous" from those at the hospital, and happy farewells on the part of the children, the group left. And who were the happier, those receiving or those who had given simply and eagerly of their abundance? Surely one small group of little citizens had quite unconsciously made themselves useful members of their community.

GRACE V. ROWLAND,
Hyannis, Mass.

AS REPORTED

EDUCATION WEEK

The program for Education Week which has been prepared by the American Legion, the National Education Association, and the United States Bureau of Education is as follows:

For God and Country

Sunday, November 18, 1923

1. Education in the home.
2. Education in the school.
3. Education in the church.

Slogan — A godly nation cannot fail.

Ministers of all denominations are urged to preach a sermon on education, either morning or evening. All communities are urged to hold mass meetings. Requests for speakers should be made to the American Legion posts throughout the country for meetings during this week.

American Constitution Day

Monday, November 19, 1923

1. Life, liberty, and justice.
2. How the Constitution guarantees these.
3. Revolutionists and radicals a menace to these guaranties.
4. Security and opportunity.

Slogans — Ballots, not bullets. Visit the schools today.

Patriotism Day

Tuesday, November 20, 1923

1. The flag — the emblem of the Nation.
2. Help the immigrants and aliens to become Americans.
3. Take an active interest in governmental affairs.
4. Music influence upon a nation.

Slogans — Visit the schools today. America first.

School and Teacher Day

Wednesday, November 21, 1923

1. The necessity of schools.
2. The teacher as a nation builder.
3. The school influence on the coming generation.
4. The school as a productive institution.
5. School needs in the community.

Slogans — Visit the schools today. Better trained and better paid teachers, more adequate buildings.

Illiteracy Day

Thursday, November 22, 1923

1. Illiteracy — a menace to our Nation.
2. An American's duty toward the uneducated.
3. Let every citizen teach one illiterate.

Slogans — No illiteracy by 1927. It can be done. Visit the schools today.

Community Day

Friday, November 23, 1923

1. Equality of opportunity in education for every American boy and girl.
2. Rural schools — City schools — Colleges.
3. A public library for every community.
4. Children today — Citizens tomorrow.

Slogans — Visit the schools today. An equal chance for all children. A square deal for the country boy and girl.

Physical Education Day

Saturday, November 24, 1923

1. Playgrounds.
2. Physical education and hygiene.
3. The great out of doors.
4. The country's need in conservation and development of forests, soil, roads, and other resources.

Slogans — A sick body makes a sick mind. Playgrounds in every community — athletes all.

THE STATUS OF THE CLASSROOM TEACHERS

At least three different groups are planning to make during the next few months a study of the present status of the classroom teacher and to make recommendations

for its improvement. These are a Committee of One Hundred, appointed by the President of the National Education Association, a Committee of the National Council of Education, and a Committee of the National League of Teachers' Associations. Since the first two will clear through the Bureau of Research of the Secretary's office of the National Education Association, they will doubtless be made to supplement each other rather than overlap. The League will carry on its investigation through the Research Committee of the San Francisco Grade Teachers' Association, which is confining its attention to the professional reading of teachers. The topics under consideration by this committee include reading for certification, for professional growth, and in connection with extension courses, as well as the various means by which reading matter is obtained. The chairman of the committee is Miss Anne B. Haigh, 333 Kearney Street, San Francisco.

ON THE PREVENTION OF WAR

A Committee of the National Council on the Prevention of War has prepared a list of stories, poems, and pageants of World Peace, and games of many lands for children from four to ten, information with regard to which may be obtained from the Educational Director of the Council, Miss Florence Boeckel, 532 Seventeenth Street, Northwest, Washington, D. C.

MY FIRST YEAR AS PRIMARY SUPERVISOR

During my first year as a primary supervisor in Dayton I sought to bring about the best teaching which my teachers in charge of the various primary classes were capable of doing, also a sympathetic coöperation.

MY FIRST MOVE

I planned a series of demonstration lessons for one week, during which time I gave type lessons, showing the necessity for careful planning on the part of the teacher, of creating a homelike informal situation in the classroom, of checking up results, and setting up definite aims and motivated lessons.

One afternoon of each week was devoted to one particular grade's work. I selected children from a centrally located school, where all the teachers in the city schools in each particular grade might come. My program was as follows:

Monday P.M.

First Grade Lessons

1. A reading lesson.
2. A language lesson.

Tuesday P.M.

Second Grade Work

1. A silent reading lesson.
2. A language lesson.
3. A socialized arithmetic lesson.

Wednesday P.M.

Third Grade Work

1. A silent reading lesson.
2. A language lesson.
3. A geography lesson.

Thursday P.M.

Fourth Grade Work

1. A silent reading lesson, followed by a language lesson as the outcome of the reading lesson.
2. A geography lesson — map study.

All teachers in grades 1 to 4 inclusive were present at the demonstrations. Everywhere there was a discussion about the work done that week. As a result many teachers asked for interviews with me, and voluntarily came to my office for help. I freely gave all the materials I had and helped them individually. It stirred things up.

THE NEXT MOVE

As a decided outcome of the demonstrations, a longing for professional advance-

ment came. Each grade met and organized with a grade president, vice-president, secretary and treasurer. They met socially and professionally. They began to want things, asking for tables and chairs in the primary grades, as well as equipment which would lend itself to informal situations.

Our fund supply was low, but we really did get chairs for all our first grades, to be used for group work.

The enthusiasm and coöperation grew stronger and stronger. The teachers rebelled against formality and mechanical situations. They planned to help the cause.

A THIRD MOVE

Another week of demonstrations followed in March, the first having been in October. I did not give these lessons. It was not a difficult thing to get teachers to do the work. I called into my office nine teachers whose work was outstanding. Several very new young teachers were among the number. I told them the plan. They were a little afraid to attempt it, but I did not learn this until after the lessons, when they told me about their first feelings. They were good sports and agreed to plan for these lessons. When they brought their plans to me individually, I was amazed at the splendid thoughtful work they had done. Their enthusiasm and loyalty, together with the splendid spirit of coöperation, made me very happy.

Before the week of demonstrations, as a class project, the children printed invitations in our printing department at Stivers Manual Training High School. Two hundred invitations were sent to the presidents of our leading clubs in Dayton, to the Board of Education members, and to various other citizens whose interest in the schools had been clearly shown.

The week was a great success. The lessons were planned and presented very well. The situations were most informal and the crowds grew larger each new demonstration day. Those teachers who were not selected formed a most sympathetic audience, and the whole city was stirred in a measure by the work done there.

The air was full of it; the newspapers were full of it. Our plans were sold to the public. Wherever I went to give talks before club women, I was told about the splendid work which my teachers did. You can imagine my own personal feelings after the work had been done so successfully.

The interest in our Primary Department has never waned. It has kept up and many teachers planned to study during the summer at our larger teachers' colleges as a result of the year's work.

ANOTHER MOVE

All the grade presidents met and planned a banquet. At this banquet we had as our special guests the board members, the special supervisors, and the grade school principals. They planned an enthusiastic banquet with clever songs set to popular tunes, showing what we were working toward. Several songs which I had brought back from the Primary Council banquet at the N. E. A. in Cleveland were used. This one especially told our feelings:

On with freedom, on with progress;
Break right through that grind.
We insist on smaller classes,
With the kiddies unconfined.
On with progress, on with freedom,
Make old fogies go,
Move the desks and move some teachers,
Give the little kids a show.

This brought down the house and there was a general outburst of laughter. The talks were well given and showed much thought on the part of each speaker. One subject upon which talks were given was, "The part which the various depart-

ments have to play in the making of the curriculum." One principal, one special supervisor, one grade teacher, the Superintendent and the primary supervisor gave their viewpoints on the subject. Dr. Gray of Chicago University was the main speaker and addressed us on the subject, "Curricula Making."

The whole primary department, numbering near three hundred, voluntarily turned out, which testified to the unusual spirit of coöperation in our department.

Our interest is growing and we are hoping for bigger and better things for our Dayton schools in the future.

IDA O. RUDY,
Primary Supervisor,
Dayton, Ohio.

THE READER'S GUIDE

SOME RECENT REPORTS

Special mention is due a number of recent reports on educational subjects. There is first of all the long-awaited report on "The Reorganization of Mathematics in Secondary Education," prepared by a national committee working under the auspices of the Mathematical Association of America.

The committee shows a commendable balance between specialists in college and teachers in the high schools. Its report covers a wide scope and is arranged in two parts, the first containing the recommendations of the committee and the second an account of special investigations carried on for it.

The most important recommendation of the committee is doubtless this, that the course in mathematics for the seventh, eighth, and ninth grades be revised so as to include certain elements of algebra, geometry, and trigonometry judged valuable for all pupils. Courses in mathematics should be offered to the pupils of the tenth, eleventh, and twelfth grades, but not all should be required to take them.

There is no conflict, the report declares, between the requirements of pupils going to college and those of pupils who are not, but certain important changes should be made in college entrance requirements and examinations. To which all believers in public education will say a fervid amen. Possibly abolishing the College Entrance Examination Board would make the revision easier.

Among the chapters devoted to special investigations, that on standardized tests by Professor C. B. Upton may be singled out for special mention. This is the most complete and satisfactory account that has appeared.[1]

The National Council of Teachers of English has recently issued a revised and greatly enlarged edition of its well-known list of "Books for Home Reading."[2] The most important editorial improvement is the grouping of titles under headings so as to indicate the content of the books. A good index makes reference to the list easy.

This is by all odds the best reading list now available. Even adults will find it valuable. Mr. Herbert Bates, the chairman of the committee of revision, deserves great credit for his painstaking labors carried forward at great personal sacrifice.

[1] The report is to be obtained of the chairman of the committee, Professor J. W. A. Young, Dartmouth College.
[2] To be had at 15 cents a copy from the Secretary, at 506 West 69th Street, Chicago, Illinois.

In a different field we have the new course in Safety Education, worked out by a group of school principals in Chicago under the leadership of Mr. George B. Masslich.[1] This is a finely illustrated pamphlet of 160 pages, containing a wealth of specific suggestions for pupil activities in relation to transportation, poisons, fire, swimming, and accidents in general. The whole is devised, however, not as a separate course but as a part of existing courses.

What may be done when enterprise is coupled with opportunity is well illustrated in a volume of verses, stories, and essays written by the pupils of The Lincoln School of Teachers College and published by the school at 425 West 123rd Street, New York City. The contributions appeared originally in *Lincoln Lore*, the school magazine, and were reprinted mainly because of their usefulness. Others will no doubt find them useful in the same way.

The Horace Mann School of Teachers College has begun the publication of a series of "Studies in Education," the first of which bears date of April, 1923. This contains nine chapters, and covers such subjects as reading, history, arithmetic, and physical education, as well as the topic of classification of pupils. Professor Williams' report of the superior results of free play as compared with formal gymnastics tends strongly to confirm a general suspicion that the rowing-machine type of exercise is comparatively barren.

SIGNIFICANT ARTICLES

EDUCATION FOR CITIZENSHIP

One of the most inspiring addresses delivered at the Summer Meeting of the National Education Association was that on Education for Citizenship by Will C. Wood, State Superintendent of Public Instruction of California. A full summary of the address appears in *American Education* for September, and is well worth careful reading. The speaker first related briefly the story of the work of the Fathers and traced the evolution of the theory of citizenship down through the Civil War period. He then pointed out that about the turning of the century there had been a great awakening in America as to the need for better and more specific duties and responsibilities. The growth of immigration and the increasing populations of our great cities, together with problems of transportation, marketing, public utilities, and taxation, have brought us face to face with the necessity for a thoroughgoing program of education in citizenship. This must include the understanding appreciation of American ideals and practical knowledge of how they may be realized in practice.

MCANDREW IN "THE WORLD'S WORK"

It is something of an event that William McAndrew should contribute a series of articles to *The World's Work* as he has begun to do with the September number, using the title "The Success of our Successors." As everybody knows, Mr. McAndrew is a brilliant writer and an original thinker. The influence which he may exert through such a periodical as *The World's Work* is great indeed. His first article is somewhat historical in character but gets down to the present and embodies numerous facts, figures, and anecdotes from recent speeches and articles of well known Americans, as well as incidents in the writer's life. The general drift is away from the following of tradition and the adjustment of our educational endeavors to the needs of the new day.

IN THE JOURNAL OF THE NATIONAL EDUCATION ASSOCIATION

The first number of the *Journal of the National Education Association* for the new

[1] Address the Superintendent of Schools, Chicago, Illinois.

year is devoted almost entirely to an account of the Summer Meetings at Oakland and San Francisco. The articles include a message from the new President of the Association, Miss Olive M. Jones of New York City, the resolutions adopted, President Owen's address on "Education for World Conduct," and the address of President Thomas of the World Conference on "Education and World Progress." An article of some length descriptive of the activities of the World Conference is contributed by the Editor of this *Journal*, who was secretary of the World Conference. Those who could not be present at the meetings will get a fair idea as to their quality from these several accounts.

SCHOOL LIFE

The journal published monthly by the Bureau of Education at Washington is now on a subscription basis but costs only 25 cents. No one interested in the progress of education can afford not to see it regularly. The number for September contains among other valuable articles a summary of the report of the Joint Commission on the Presentation of Social Studies in the Schools, a report of the Committee of the National Education Association on Permanent Tenure, accounts of successful elementary schools including only seven years, and the important announcement that the courts have annulled the statutes in various states directed against the teaching of foreign languages. There is, in addition, an excellent outline prepared by a committee of the Home Economics Association on training of teachers of home economics. Like the *Journal of the National Education Association* this periodical is of value in acquainting the reader with the new books in the field of education, though it publishes only a selective, not also an inclusive, list.

THE NEW HIGH SCHOOL IN GERMANY

Professor H. W. Puckett of Columbia University answers some of the questions which Americans are asking about the present condition of the schools of Germany. In *School and Society* for September 1, he gives a summary of the condition of the "German Popular High School After Three Years." He says that educational reform in Germany has moved so fast that there is already a reaction and there is some doubt whether the people's high schools, modelled after those of Denmark, will survive the storm. A part of the criticism of these schools is due to the fact that more was expected of them than they could possibly achieve in a short period. Besides this, the people of Germany have had little experience with this sort of instruction and were bound to make mistakes. The popular high school does not fit into the general scheme of the country but was intended for the working class. Unless they rally to its support it is destined to undergo very radical changes.

THE NEW BOOKS

Motion Pictures in Education. A practical handbook for users of visual aids. By Don Carlos Ellis and Laura Thorborough. New York: Thomas Y. Crowell Company, 1923. Pp. xvii+284.

The Principal and His School. The Organization Administration, and Supervision of Instruction in an Elementary School. By Ellwood P. Cubberley. Boston: Houghton Mifflin Company, 1923. Pp. xviii+571. Price, $2.40.

A Guide to Educational Measurements. By Harlan C. Hines. Boston: Houghton Mifflin Company, 1923. Pp. xxiv+270. Price, $1.90.

Rural Education. By Arthur W. Ashby and Phoebe G. Byles. Oxford University Press, 1923. Pp. 227. $.85.

The New Democracy in the Teaching of English. By Walter Barnes. Chicago: Rand McNally & Company, 1923. Pp. 105.

The Psychology of Algebra. By Edward L. Thorndike, Margaret V. Cobb, Jacob S. Orleans, Percival M. Symonds, Elva Wald and Ella Woodyard of the Institute of Educational Research, Teachers College, Columbia University. New York: The Macmillan Company, 1923. Pp. xl+483.

Religion and the Study of Literature. By Brother Leo. New York: Schwartz, Kirwin & Fauss, 1923. Pp. 178. Price, $1.25.

Mental Tests and the Classroom Teacher. By Virgil E. Dickson. Yonkers-on-Hudson, N. Y.: World Book Company, 1923. Pp. xv+231.

Measurement in Higher Education. By Ben D. Wood. Yonkers-on-Hudson, N. Y.: World Book Company, 1923. Pp. xi+337.

Learning and Teaching. By Arthur Raymond Mead. Philadelphia: J. B. Lippincott Company, 1923. Pp. xi+277.

Vitalized Teaching. By William Carl Ruediger. Boston: Houghton Mifflin Company, 1923. Pp. viii+110. Price, $1.20.

New Essentials of Biology. Presented in Problems. By George W. Hunter. New York: American Book Company, 1923. Pp. x+453. Illus.

History of the American People. Rev. Ed. By William Mason West. Boston: Allyn & Bacon, 1922. Pp. xvi+764+47. Illus. Price, $2.00. For high-school use.

Poems of New Jersey. An Anthology edited by Eugene B. Musgrove. New York: Gregg Publishing Company, 1923. Pp. 472. Illus.

Adam Bede. By George Eliot. Edited with Introduction and Notes by Samuel W. Patterson (Macmillan's Pocket Classics). New York: The Macmillan Company, 1923. Pp. xix+613.

Silas Marner. By George Eliot. Edited with Introduction and Notes by Charles Robert Gaston. Boston: Atlantic Monthly Press. Pp. xxvi+257.

Tennyson's Idylls of the King. Selections. Edited by Rollo La V. Lyman. Atlantic Library of English Classics. Boston: Atlantic Monthly Press, 1923. Pp. xxviii+182.

Essential Language Habits, Book III. By Esther Marshall Cowan, Annette Betz, W. W. Charters. New York: Silver, Burdett & Company, 1923. Pp. viii+439.

How to Use the Dictionary. By Martin C. Flaherty. New York: Ronald Press Company, 1923. Pp. 108.

English for Boys and Men. By Homer J. Smith. Boston: Ginn & Co., 1923. Pp. xxii+330. Price, $1.40.

Reader for New Americans, Book I. By John A. Long. New York: American Book Company, 1923. Pp. 224. Illus. Price, $.68.

Reader for New Americans, Book II. By John A. Long. New York: American Book Company, 1923. Pp. 208. Illus. Price, $.68.

Hidden Heroes of the Rockies. By Isaac K. Russell. In collaboration with Howard R. Driggs. Yonkers-on-Hudson, N. Y.: World Book Company, 1923. Pp. xi+295.

Good Citizenship Through Story-Telling. By Mildred P. Forbes. New York: The Macmillan Company, 1923. Pp. 255. Illus.

IN PAPER COVERS

Projects and Problems in Geography (A Work Book). The Eastern Hemisphere. By J. F. Peeler and L. W. Newton. Dallas, Texas: The Southern Publishing Company, 1922.

Projects and Problems in Geography (A Work Book). The Western Hemisphere. By J. F. Peeler and L. W. Newton. Dallas, Texas: The Southern Publishing Company, 1922.

Research Bulletin of the National Education Association, Vol. 1, No. 1, January, 1923. Published by The Research Division of The National Education Association, Washington, D. C.

Syllabus in the Principles of Educational Methods. Topics and Questions, with Reading References for Guidance of Study and Discussion. By John P. Wynne. Mississippi Agricultural and Mechanical College, Agricultural College, Miss., 1922. Price, $.75.

The Project Method in Composition. By W. Wilbur Hatfield. Reprinted from the English Journal, Chicago, Ill. Price, $.25.

Hawaii's Public Schools. Biennial Report of the Department of Public Instruction, Territory of Hawaii, 1921–1922. Published by the Department, January, 1923.

A Course of Study in Terms of Children's Activities. For Kindergarten and Primary Grades. By Helen Mary Reynolds, Department of Public Instruction, Seattle, Wash. Price, $.50.

Maryland School Bulletin, September, 1923. Worth-While Teachers' Meetings. State Department of Education, Baltimore, Md.

National League of Teachers' Associations. *Year Book*, 1922–1923. 45 Henry Street, San Francisco, Cal.

University of Illinois Bulletin No. 12. *The Use of Intelligence Tests as a Basis of School Organization and Instruction*. By Charles E. Odell. University of Illinois, Urbana, Ill., 1922. Price, $.50.

University of Illinois Bulletin No. 14. *The Use of Different Types of Thought Questions in Secondary Schools and Their Relative Difficulty for Students*. By Walter S. Monroe and Ralph E. Carter. University of Illinois, Urbana, Ill., 1923. Price, $.30.

Proceedings of the Twenty-Eighth Annual Meeting of the North Central Association of Colleges and Secondary Schools. Part I. Edited by C. O. Davis, University of Michigan, Ann Arbor, Mich. Price, $.50.

Bucyrus City Schools. Survey Bulletin, Vol. IV, No. 3, June, 1923. Bucyrus, Ohio.

The Lincoln School Library. By Anne T. Eaton. The Lincoln School of Teachers College, 425 West 123rd Street, New York City, 1923.

Department of the Interior, Bureau of Education, Washington, D. C., 1923. *Kindergartens Past and Present*, by Julia Wade Abbott. *How the Kindergarten Makes Americans*, by Earl Barnes. *Infant Mortality*, Results of a Field Study in Gary, Ind., Based on Births in One Year, by Elizabeth Hughes. *Some Important School Legislation 1921 and 1922*, by William R. Hood. *The Organization of the One-Teacher School*, by Edith A. Lathrop.